

Influenza 2016-2017

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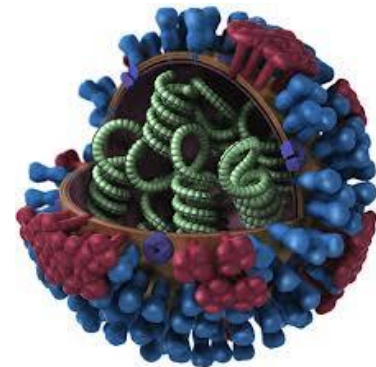
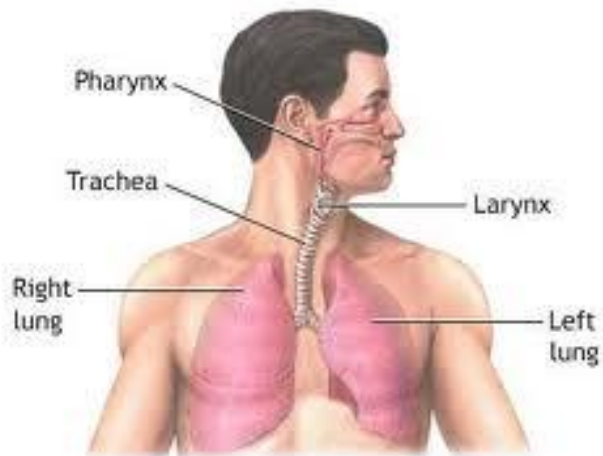


Today's Topics:

- Influenza Review
- Signs & Symptoms
- Care & Treatment
- Flu Vaccine
- Flu Data

What is Influenza?

The flu is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and can sometimes lead to hospitalization and death.



How the Flu Spreads:

Flu viruses spread mainly by droplets



It is also possible to contract the flu by touching an infected surface or object and then touching your own mouth, eyes, or nose.

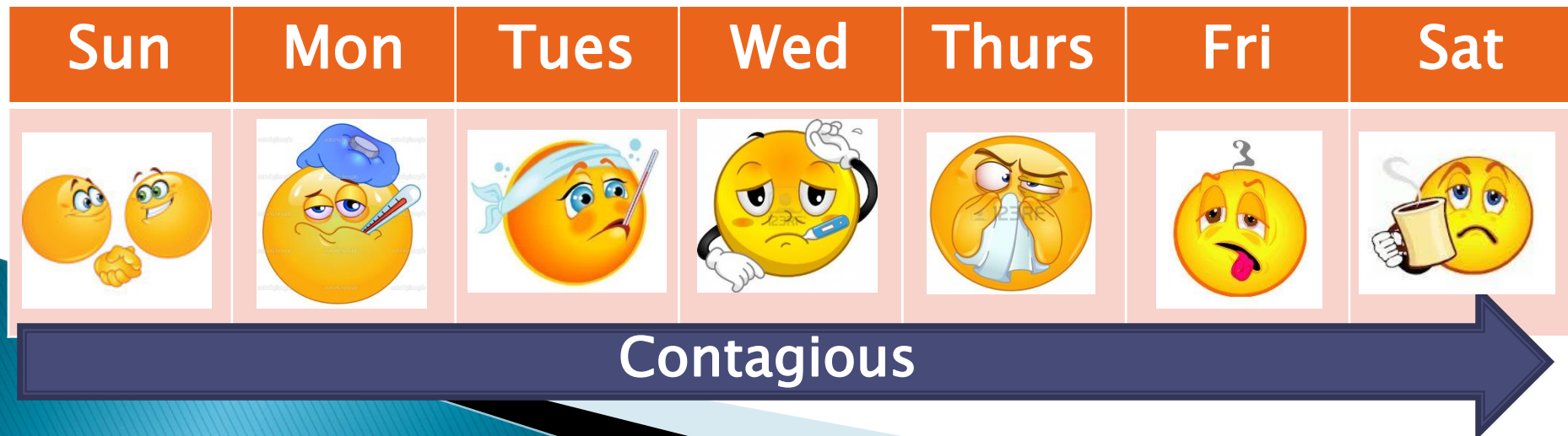
Incubation Period:



Typical incubation period for influenza is 1 to 4 days
(Average: 2 days)

Period of Contagiousness:

Most healthy adults can infect others beginning 1 day before symptoms occur and up to 5–7 days after becoming sick.



Signs and Symptoms:



Cold vs. Flu

Symptom	Influenza	Common Cold
Fever	Usual	Uncommon
Headache	Prominent	Uncommon
Muscle/ Joint aches	Usual	Slight
Exhaustion	Early and Prominent	Rare and Mild
Upper Resp. Sx	Sometimes	Usual
Chest Discomfort	Common (+/- severe)	Uncommon & Mild
Prevention	Hygiene and Vaccine	Respiratory hygiene
Treatment	Anti-Virals	None

Flu Care

- ▶ Stay home and avoid contact with people
- ▶ Drink plenty of water and other clear fluids
- ▶ Treat fever and cough with over-the-counter medications
- ▶ Get plenty of rest
- ▶ Prevent by getting flu vaccine



Influenza Vaccine



History of the Influenza Vaccine

- ▶ **1918–19**– Spanish Flu pandemic kills 30–50 million people worldwide
- ▶ **1931**: Discovery that viruses can be grown in eggs
- ▶ **1935**: First egg culture vaccination was made (smallpox)
- ▶ **1935–41**: First human influenza vaccines were tested
- ▶ **1942–43**: Extensive influenza vaccine studies were performed at army posts and the US military developed the first approved inactivated influenza vaccines which were used during World War II.

Vaccine Strains

16'–17'

1. Influenza A– California /2009 / H1N1
2. Influenza A– Hong Kong / 2014 /H3N2
3. Influenza B– Brisbane/ 2008 (Trivalent)
4. Influenza B– Phuket/ 2013 (Quadrivalent)



Flu Vaccines Presentations

- **Standard Intramuscular Vaccine**

- Trivalent (3 strains)
- Quadrivalent (4 strains)



- **High-Dose Intramuscular Vaccine**

- Approved for people 65 and older



- **Intradermal vaccine**

- Injected into the skin instead of the muscle
- Approved for ages 18-64



- **Nasal Spray (FluMist)**

- Not recommended this year



Changes in Recommendations:

▶ **FluMist Vaccine is NOT recommended**

- During the 2016-2017 season, only injectable flu vaccine should be used
- Live attenuated influenza vaccine (LAIV), sold as FluMist, is **NOT** recommended because of concerns about its effectiveness



FluMist Vaccine is NOT Recommended

Flu Vaccine Efficacy Studies

Season (Predominant Strain)	Age Range (yrs)	Adjusted VE (95% CI)	
		LAIV4	IIV3/IIV4
2013-2014 (H1N1pdm09)	2-17	2% (-53 to 37)	61% (42 to 74)
	2-8	-39% (-156 to 25)	60% (32 to 76)
	9-17	36% (-31 to 69)	62% (30 to 80)
2014-2015 (H3N2)	2-17	9% (-18 to 29)	31% (16 to 44)
	2-8	9% (-28 to 35)	26% (2 to 44)
	9-17	17% (-27 to 46)	33% (9 to 51)
2015-2016 (H1N1pdm09)	2-17	3% (-49 to 37)	63% (52 to 72)
	2-8	-3% (-76 to 40)	58% (40 to 70)
	9-17	20% (-78 to 64)	71% (52 to 82)

Influenza Vaccination: Interim ACIP Recommendation for 2016–2017

“In light of evidence for poor effectiveness of LAIV in the U.S. over the last three influenza seasons (2013–2014 through 2015–2016),
for the 2016–17 season,
ACIP makes the interim recommendation
that LAIV should not be used.”

Changes in Recommendations:

Egg Allergy? No Problem!

- ▶ **CDC guidance says anyone with an egg allergy can receive any licensed flu vaccine**
 - Vaccine should be administered in an inpatient or outpatient medical setting and should be supervised by HCP able to recognize and manage severe allergic conditions
 - No longer have to wait 30 min. after getting vaccine
- ▶ **CDC study found that rate of anaphylaxis after all vaccine is only 1.3 per one million vaccine doses given.**

<http://www.cdc.gov/flu/protect/vaccine/quadrivalent.htm>



FLU VACCINE CATEGORIES



ANY QUESTIONS?

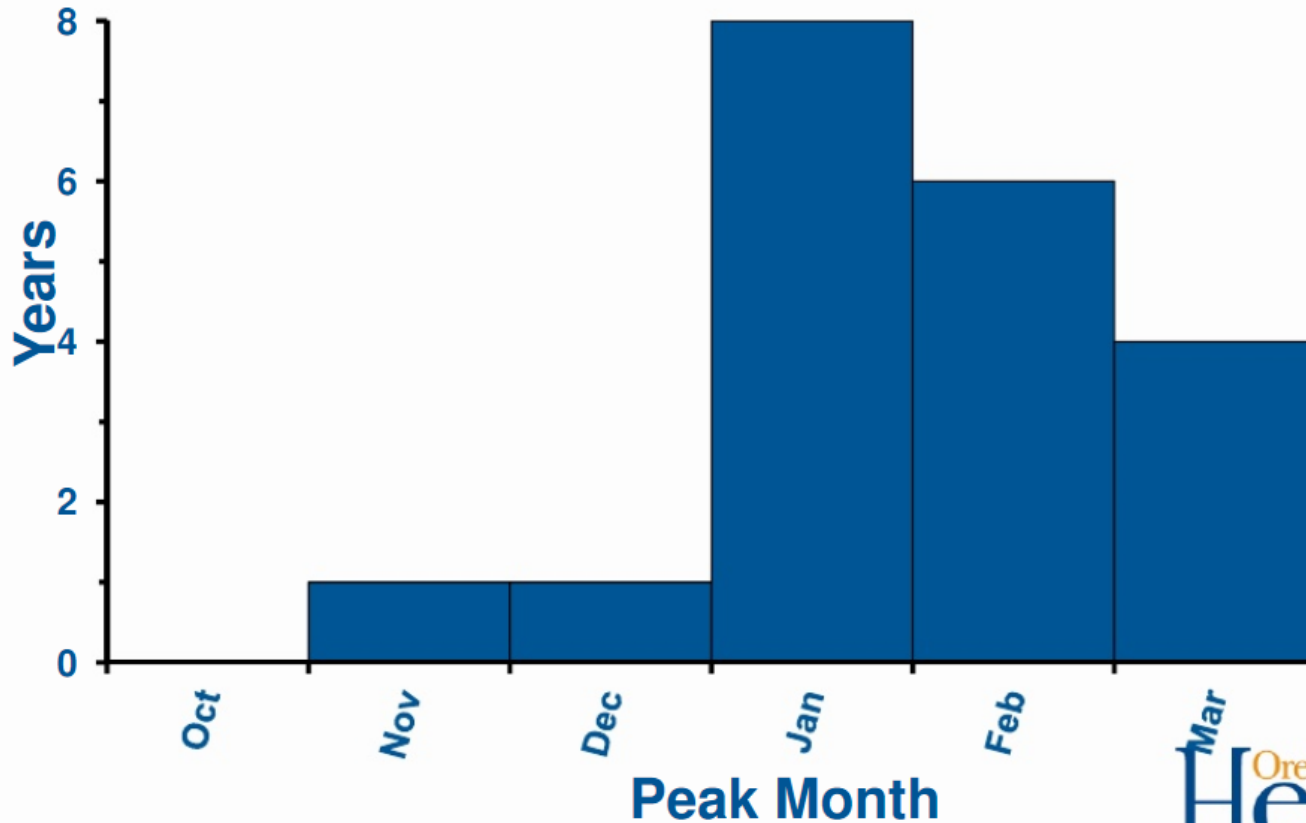


Flu Activity



Influenza is unpredictable and every flu season is different. Influenza activity often begins to increase in October and November. Most of the time flu activity peaks between December and March and can last as late as May.

Peak Month of Influenza Activity Oregon, 1996–2016



FLUVIEW

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Percentage of Visits for Influenza-like Illness (ILI) Reported by
the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet),
Weekly National Summary, 2016-2017 and Selected Previous Seasons

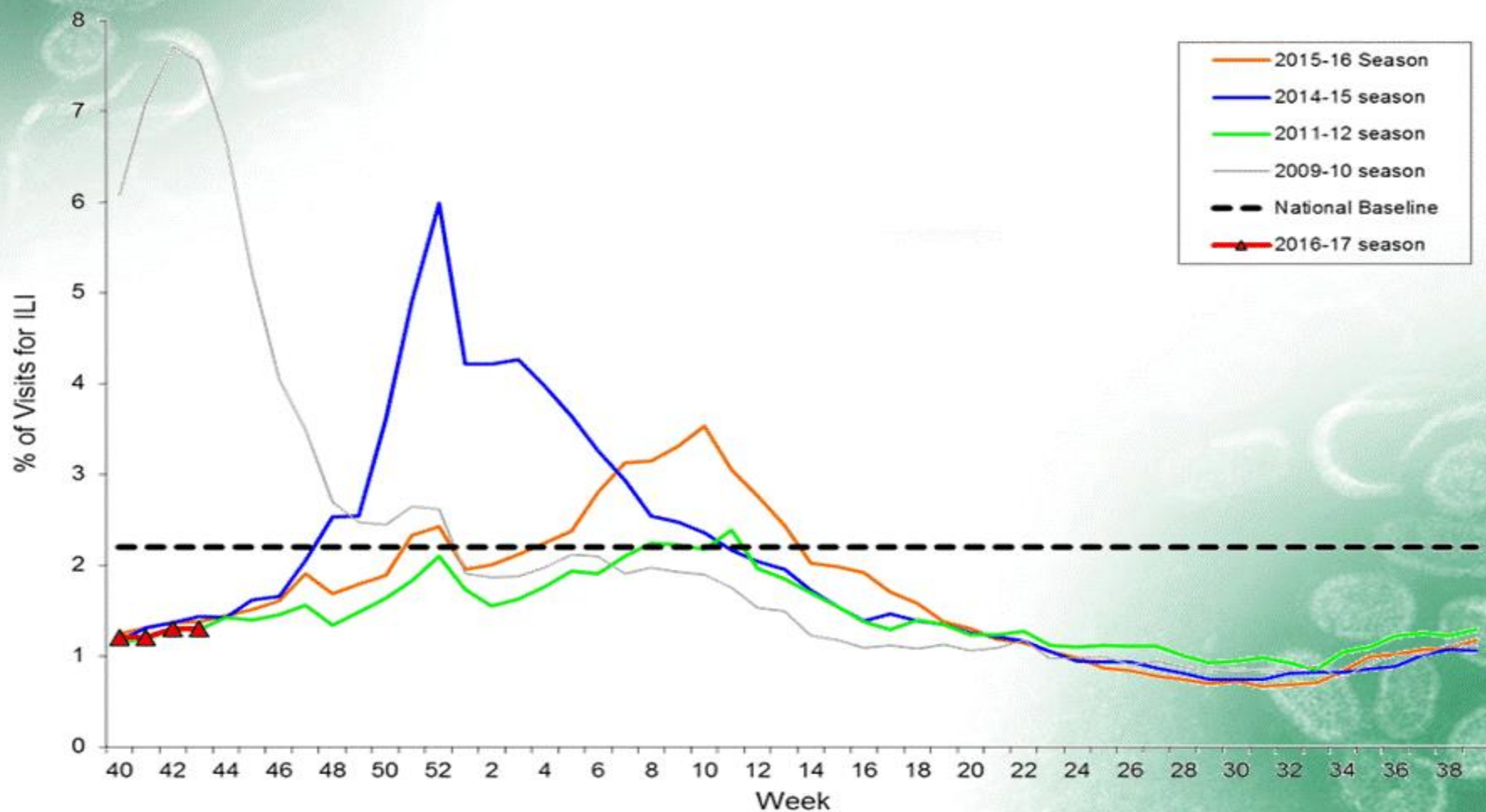
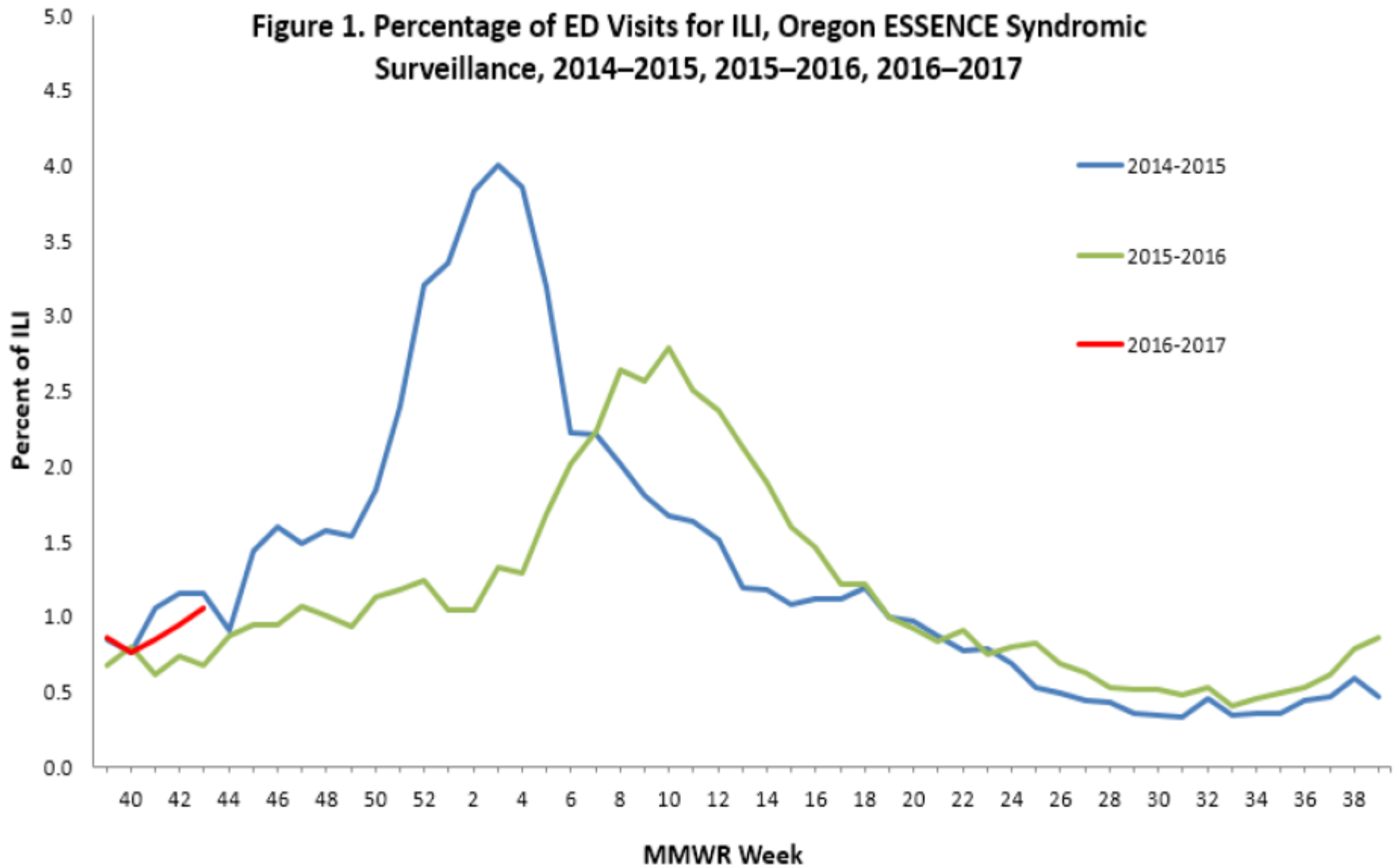
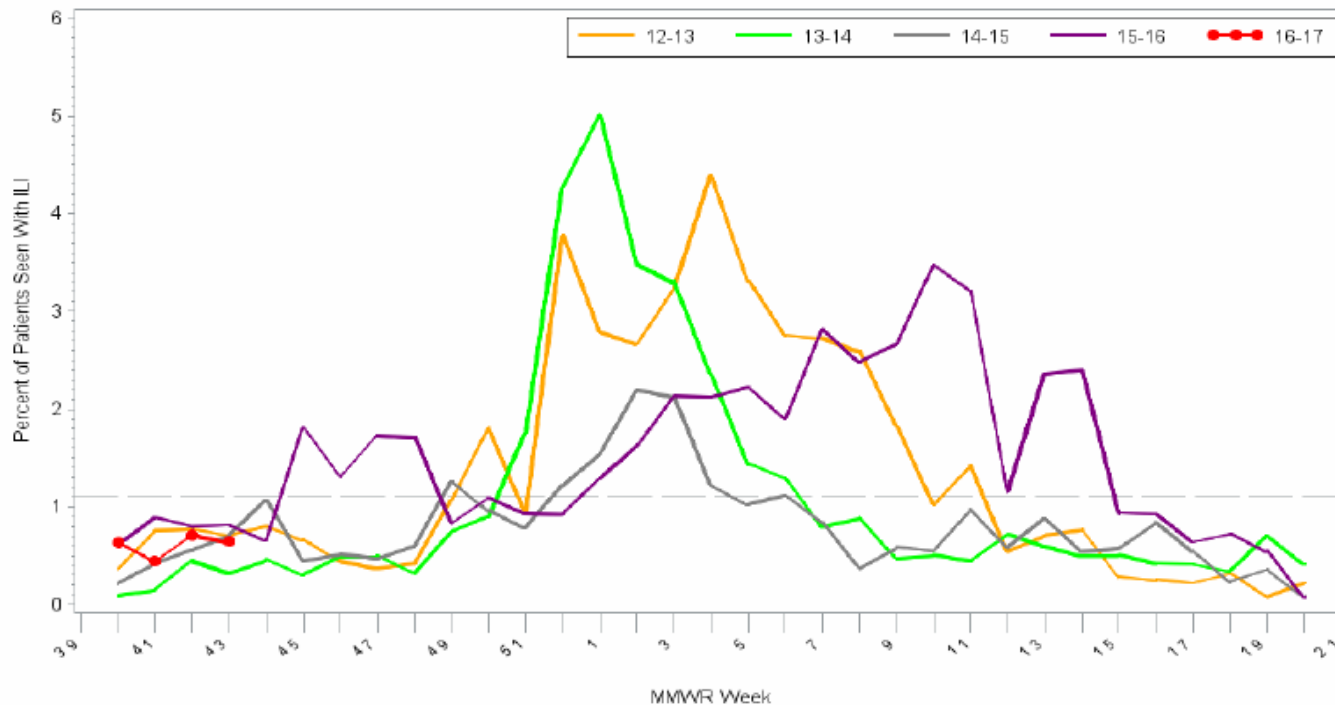


Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2014–2015, 2015–2016, 2016–2017



What flu season is doing now...

Oregon Health Authority, Acute and Communicable Disease Prevention 04NOV16
Oregon Outpatient Influenza-Like Illness Surveillance Network (ILINet)
Percent of Outpatients with Influenza-like Illness (ILI)
2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017



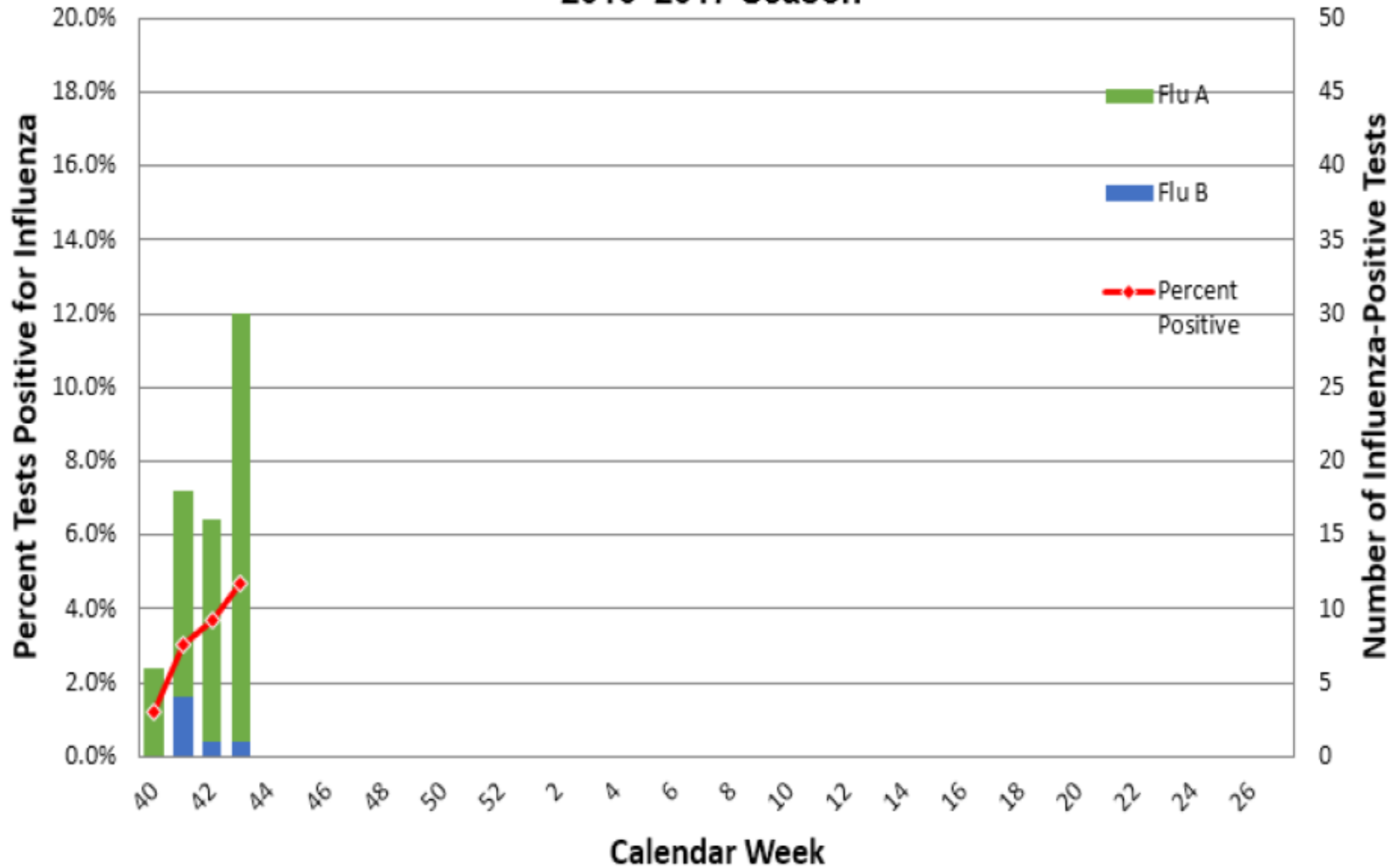
Note: ILI is defined as fever ($\geq 100^{\circ}\text{F}$) and cough or sore throat.

*The seasonal ILI baseline (threshold) is calculated by CDC and averages the ILI seen during non-influenza weeks in the northwestern region of the US, including AK, WA, OR, and ID.

All Flu Bites data provided are preliminary and may change as additional reports are received.

Surveillance weeks run from Sunday through Saturday
Sentinel providers report the number of patients seen with influenza-like illness as well as total patients seen each week.

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2016–2017 Season**

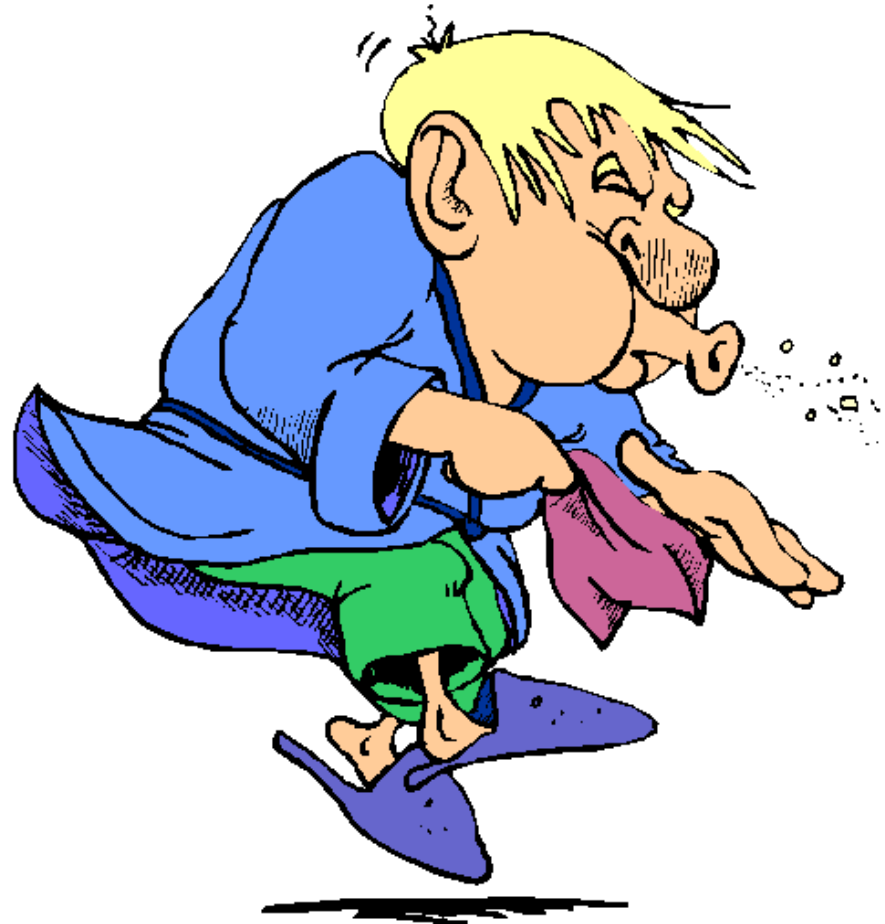


Lane County Info:

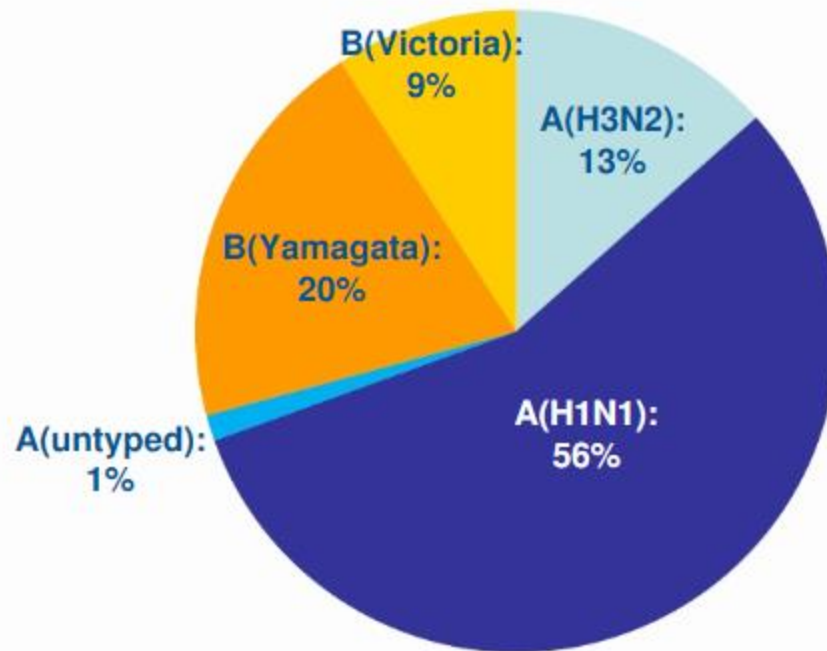
- ▶ We have seen Influenza in the community since October 1st, 2016
- ▶ Majority of cases are Influenza A
- ▶ >250 ILI reports and about 15 confirmed cases in current Florence outbreak



Influenza Projections:



Influenza, by Subtype United States, 2015–2016 Season

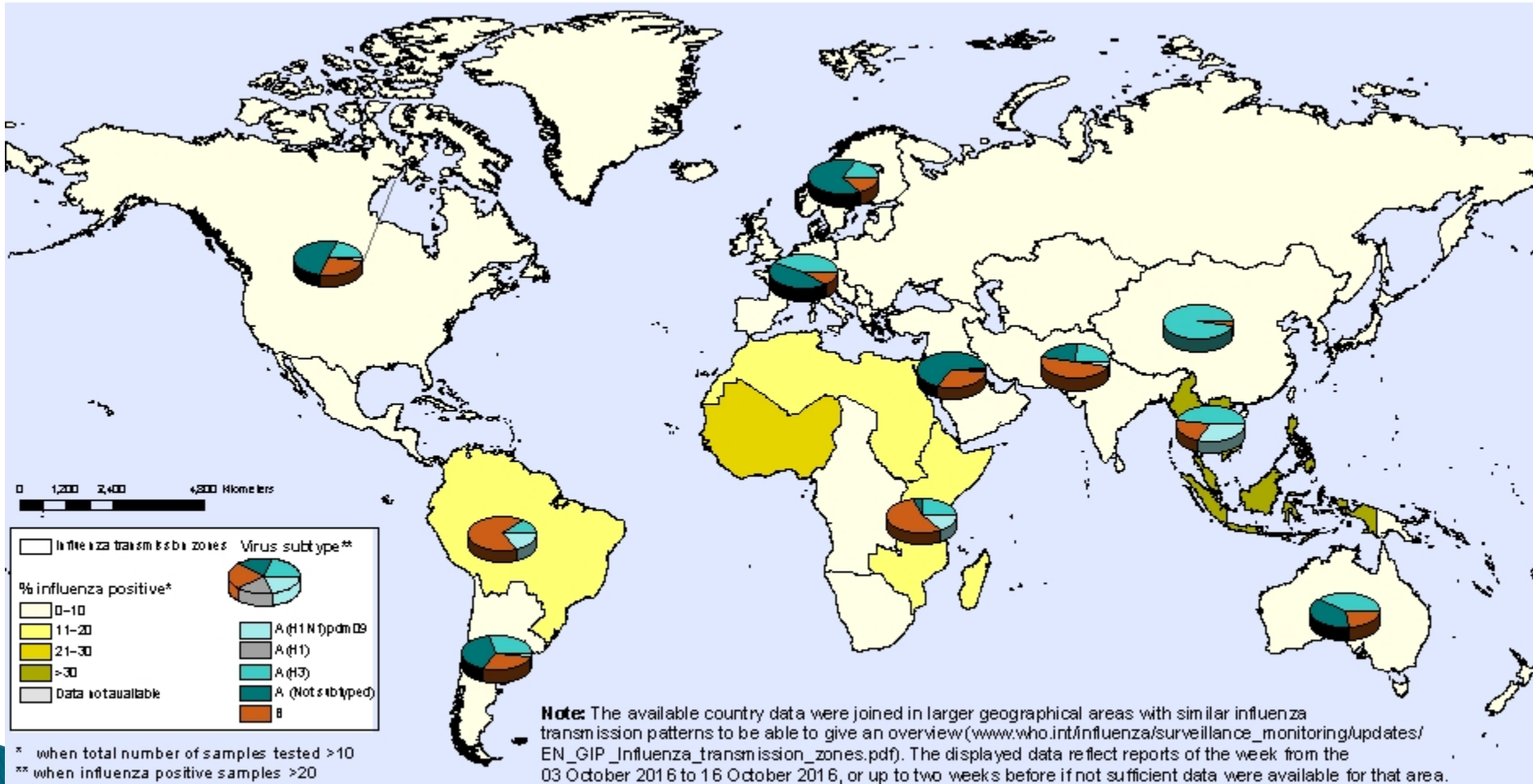


CDC. MMWR 2016; 65:567–75.

World View:

Percentage of respiratory specimens that tested positive for influenza
By influenza transmission zone

Status as of 28 October 2016



* when total number of samples tested > 10
** when influenza positive samples > 20

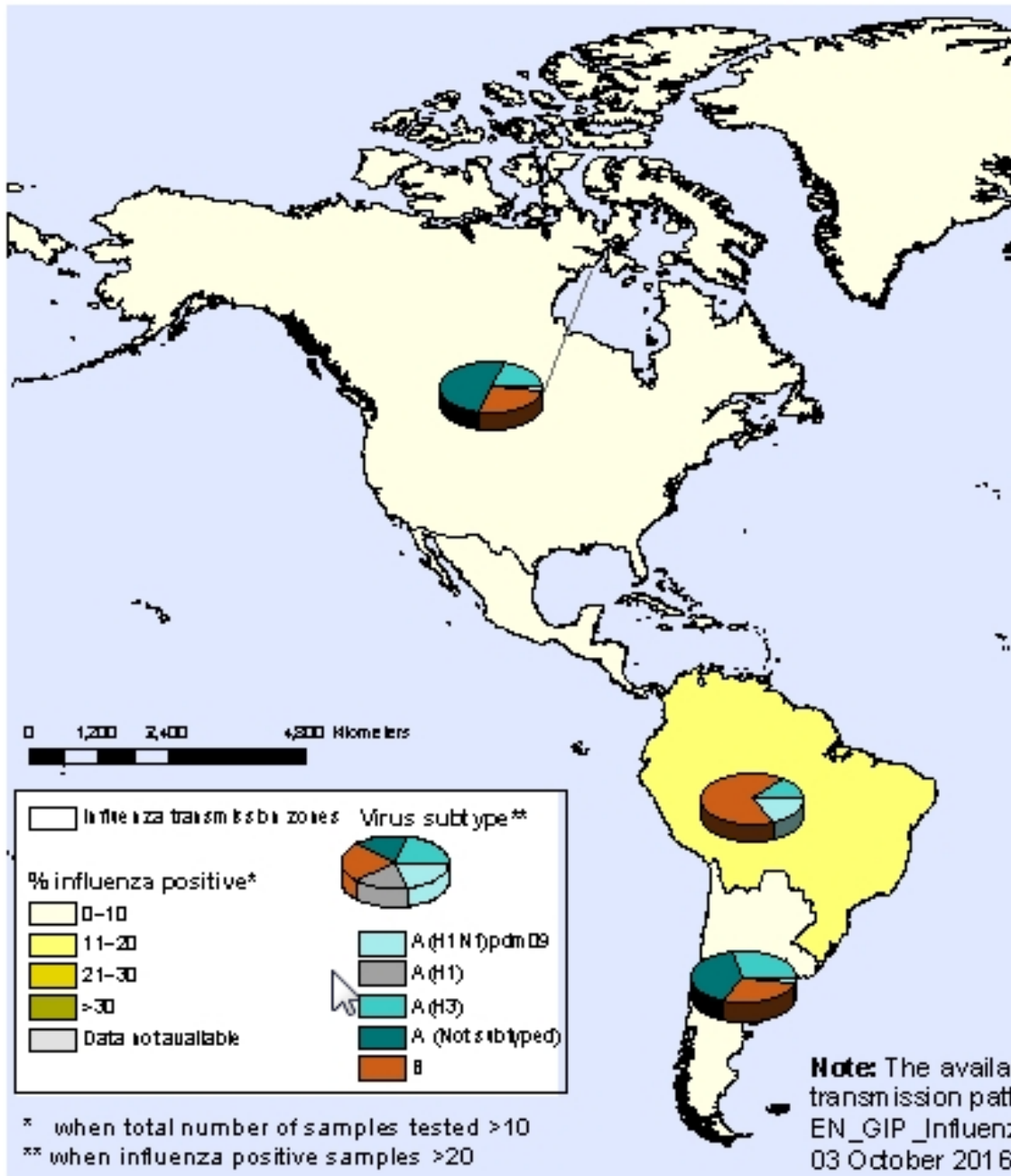
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: Global Influenza Surveillance and Response System (GISRS), FluNet (www.who.int/flu-net).



http://www.who.int/influenza/surveillance_monitoring/updates/

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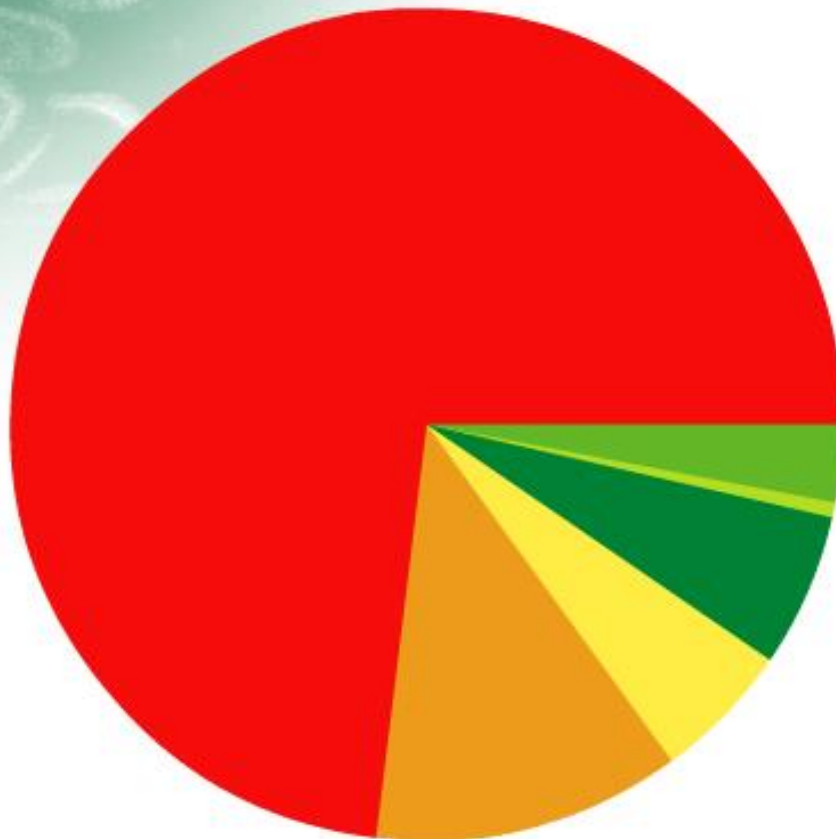
National View:

FLUVIEW



Influenza Positive Tests Reported to CDC by Public Health Laboratories, National Summary, 2016-17 Season, week ending Oct 28, 2016

Reported by: U.S. WHO/NREVSS Collaborating Laboratories



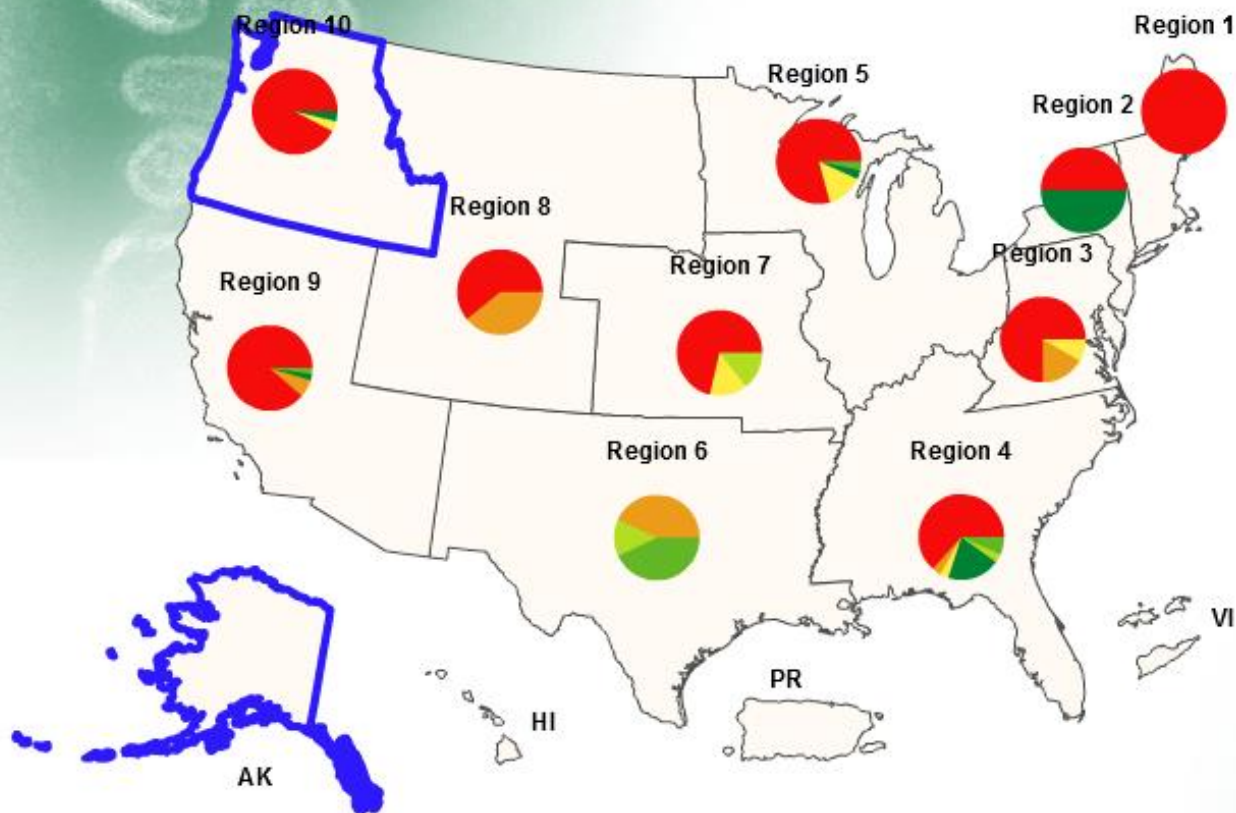
- Cumulative
 - Most recent 3 weeks
- Number of Influenza Positive Tests**
- A(H1) - 0
 - A(Unable to Subtype) - 0
 - A(H3) - 122
 - A(H1N1)pdm09 - 20
 - A(Subtyping not Performed) - 9
 - B (Lineage Unspecified) - 10
 - H3N2v - 0
 - B (Victoria Lineage) - 1
 - B (Yamagata Lineage) - 5
 - No Data

National and Regional View:

FLUVIEW



Influenza Positive Tests Reported to CDC by Public Health Laboratories and ILI Activity, by HHS Region, 2016-17 Season, week ending Oct 28, 2016
 Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet



- Cumulative
- Most recent 3 weeks

Piechart Legend

(Piechart includes data from most recent 3 weeks of season)

- A(H1) - 0
- A(Unclassified) - 0
- A(H3) - 48
- A(H1N1)pdm09 - 0
- A(Subtyping not Performed) - 2
- B (Lineage Unspecified) - 2
- H3N2v - 0
- B (Victoria Lineage) - 0
- B (Yamagata Lineage) - 0
- No Data

Map Legend

- ILI Elevated
- ILI Normal
- No Data

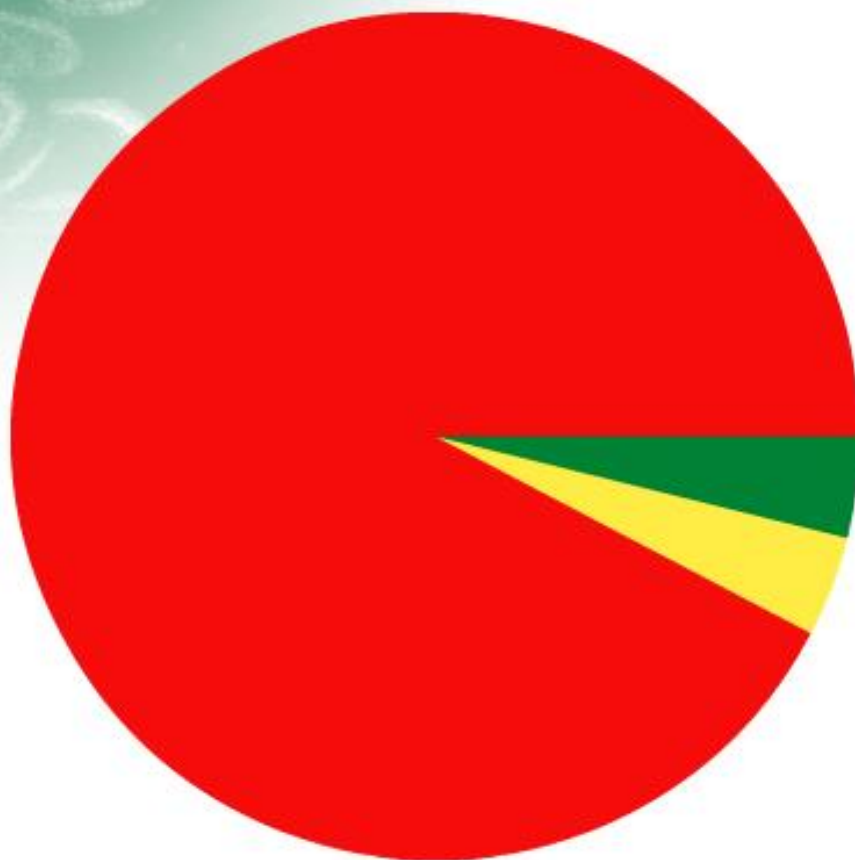


Regional View:

FLUVIEW

Influenza Positive Tests Reported to CDC by Public Health Laboratories, HHS Region 10, 2016-17 Season, week ending Oct 28, 2016

Reported by: U.S. WHO/NREVSS Collaborating Laboratories



Cumulative

Most recent 3 weeks

Number of Influenza Positive Tests

- A(H1) - 0
- A(Unable to Subtype) - 0
- A(H3) - 48
- A(H3N1)pdm09 - 0
- A(Subtyping not Performed) - 2
- B (Lineage Unspecified) - 2
- H3N2v - 0
- B (Victoria Lineage) - 0
- B (Yamagata Lineage) - 0
- No Data

Oregon View:

Table 1. Influenza Test Results in Oregon, NREVSS, 2016–2017.

	Current Week	Cumulative
No. of specimens tested	643	2,374
No. of positive specimens (%)	30 (4.7%)	77 (3.2%)
<i>Positive specimens by type</i>		
Influenza A	29 (97%)	64 (89%)
Influenza B	1 (3%)	6 (8%)

Flu Impact:

- **USA data** (CDC):
 - Average ~200,000 hospitalizations/year
 - Average 36,000 deaths/year
 - (range from 1976 to 2007 was 3,000 to 49,000)
- **Lane County's yearly direct medical costs from Flu** (AHRQ Healthcare Cost and Utilization Project):
 - Inpatient care: \$1.5 million
 - Outpatient care: \$11 million



So...

Protect yourself and your
community and

get
your
flu shot

A medical syringe with a needle is positioned diagonally across the text. The needle is pointing towards the word 'flu' in the phrase 'get your flu shot'. The syringe is clear with a white plunger and a black needle. The text 'get your flu shot' is written in colorful, 3D-style letters: 'get' (green, yellow, pink), 'your' (orange, blue, pink), and 'flu shot' (green, blue, pink, orange, blue, pink).

A collection of colorful 3D question marks scattered on a white surface. The question marks are in various colors including purple, red, blue, yellow, green, and pink. They are arranged in a somewhat circular pattern around the central text. The text "Any Questions?" is written in a bold, black, sans-serif font with a slight shadow effect, centered over the image.

Any Questions?